

## **Geochemistry, petrogenesis and gold occurrence of Rixen Deposit in Ulu Sokor area, Peninsular Malaysia**

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Rixen deposit is one of the gold occurrences in Ulu Sokor area, which is in the northern part of Central Belt in Peninsular Malaysia and around 50km to the east of Bentong- Raub Suture Zone [1], a major terrane boundary that marks the collision of Sibumasu and East Malaya blocks at the Triassic Indosinian Orogeny. Peninsular Malaysia is situated on two tectono-stratigraphic continental terranes, namely Sibumasu and East Malaya blocks. Rifting of the north-eastern margin of ancient Gondwana during Late Permian to Early Jurassic is the possible origin of these blocks. The gold mineralization is heavily controlled by the regional structures and closely related to Bentong- Raub Suture. In this study, rare earth elements (REE) such as Th, Ta and Yb are more emphasized in classification to lower the metamorphism and alteration effect (i.e. silicification, chloritisation and sericitisation). Rixen deposit is consisted of a set of calc-alkali series aluminium-oversaturated volcanic rocks, and enriched in large ionic lithophile elements (LILE) and lightly enriched in light rare earth elements (LREE). The protolith is a set of intermediate- acidic volcanic rocks, ranging from andesite to rhyolite, with rare mafic rocks. Tectonic setting is in active continental margins-volcanic island arc area, and possibly related to subduction. Gold occurred as electrum with variable Ag content (20-46%) and rare Ag-rich gold grains (Ag content 10-12%). Most of the gold grains are hosted by pyrite and associated with very rare galena and chalcopyrite, disseminating in quartz.

[1] Hutchison C. S. (2009), *Geology of Peninsular Malaysia*, 309.